

REMARKS/ARGUMENTS

Re-examination and favorable reconsideration in light of the above amendments and the following comments are respectfully requested.

Claims 3, 5, 7, 9 - 11, and 15 - 20 are pending in the application. Currently, no claim has been allowed.

By the present amendment, claims 18 and 20 have been amended.

In the office action mailed September 8, 2005, claims 3, 7, 9, and 11 - 20 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,483,054 to Ledwith; claims 3, 5, 7, 15 - 18, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,156,525 to Ciokajlo.

The foregoing rejections are traversed by the instant response.

The present invention relates to a turbine structure for use in a gas turbine engine. The turbine structure comprises a one piece drum rotor. The drum rotor including a plurality of turbine disks welded together and having a first diameter at a leading one of said turbine disks and a second diameter at a trailing one of said turbine disks wherein the first diameter is greater than the second diameter. The drum rotor further includes a plurality of integrally formed knife elements and an integrally formed flange for allowing the one-piece drum rotor to be joined to an adjacent structure. The turbine structure further comprises a plurality of turbine blades attached to the one-piece drum rotor. Each of the turbine blades is attached to the one-piece drum rotor by a fir tree arrangement.

The present invention also relates to a method for installing a turbine structure into a turbine section of a gas turbine engine comprising the step of installing a one-piece

drum rotor with an upstream set of turbine blades attached to the one-piece drum rotor. The installing step comprises joining the one-piece drum rotor to an adjacent structure via a flange and a nut and bolt arrangement.

Claim 18, as well as new claim 20, as amended herein are not anticipated by the Ledwith patent. Ledwith does not teach or suggest attaching the turbine blades to the one-piece drum rotor by a fir tree arrangement. Ledwith uses a conventional dovetail arrangement to join the turbine blades to the one-piece drum rotor.

Claims 3, 7, 9, and 15 - 17 are allowable for the same reasons as their parent claims as well as on their own accord.

Method claim 19 is allowable because Ledwith does not teach or suggest the claimed installing step. In fact, Ledwith is totally silent as to how the rotor is installed. The only method described in Ledwith is the method of manufacturing the drum rotor. It is noted that the Examiner does not point to any section of Ledwith which teaches or suggests the claimed method.

Claims 11 - 13 are allowable for the same reasons as claim 19 as well as on their own accord. With regard to claims 11 - 13, Ledwith does not teach or suggest the sequence of claimed method steps. The Ledwith patent does not disclose installing a first array of stator vanes relative to the one-piece drum rotor after the installing step; or installing a second array of stator vanes and thereafter installing a third set of turbine blades. The stator vanes in Ledwith are installed at one time.

With regard to the rejection of claims 3, 5, 7, and 15 - 17, 18 and 20 on obviousness grounds over Ciokajlo, one of ordinary skill in the art having read this reference would not be motivated to make the modification proposed by the Examiner. To make the knife edge elements integrally formed with the drum rotor is to eliminate the spacers 54, 56, 82, 84 and 86 and

their function of providing effective axial retention of the respective blades between adjacent rotor discs. As noted by Ciokajlo, the spacers are of particular significance to his invention. See column 9, lines 4 - 12 of Ciokajlo. Still further, even if were to make the proposed modification, one still would not have fir tree arrangements for joining the blades to the drum rotor. For these reasons, claims 18 and 20 are allowable over Ciokajlo.

Claims 3, 5, 7, and 16 - 17 are allowable for the same reasons as claim 18 and 20 as well as on their own accord. For the foregoing reasons, the instant application is believed to be in condition for allowance. Such allowance is respectfully solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, he is hereby invited to contact Applicants' attorney at the telephone number listed below.

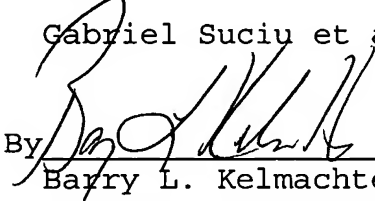
A Notice of Appeal is enclosed herewith.

The Director is hereby authorized to charge the Notice of Appeal fee of \$500.00 to Deposit Account No. 21-0279. Should the Director determine that an additional fee is due, he is hereby authorized to charge said fee to said Deposit Account.

Respectfully submitted,

Gabriel Suciu et al.

By


Barry L. Kelmachter
BACHMAN & LaPOINTE, P.C.
Reg. No. 29,999
Attorney for Applicants
Telephone: (203) 777-6628 ext. 112
Telefax: (203) 865-0297

Date: December 5, 2005 Email: docket@bachlap.com

I, Nicole Motzer, hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on December 5, 2005.

